

# AMATEUR RADIO



Published in the interests of the Wireless  
Institute of Australia, Office 2-942 of all  
divisions of the W.I.A. and R.A.A.F.W.R.



PRICE  
**6D**

NOVEMBER, 1938

# Birnbach INSULATORS



**BIRNBACH TRANSMITTING TUBE SOCKETS.**  
Available in 10 and 50w. with side wiping contacts. Brass nickel-plated shell highly vitrified low absorption base.

10w., No. 435 . . . . . 9/6 nett  
50w., No. 434 . . . . . 15/- nett

## BIRNBACH TRANSMITTER LEAD-IN INSULATOR.

2 3/4in. high with 10in. Rod, complete with bushings and cork washers to permit watertight seal both indoors and outdoors

No. 4237, 10. . . . . 12/6

## BIRNBACH GRAMOPHONE NEEDLE CHUCK TYPE TEST PRODS.

Complete with kinkless wire and phone tip ends, overall length 50 inches.

Prices . . . . . 5/- nett

## FEEDER SPREADERS.

464, 4in. . . . . 1/3  
469, 6in. . . . . 1/9

## BIRNBACH STANDOFF INSULATORS.

Designed to the same high standard that characterises the extensive line of Birnbach wet process Insulators.

4450, 4 1/2in. high . 6/- 766 Beehive Type, 2/-  
4275, 2 3/4in. high . 4/- 4450, Jack Type, 12/6  
866, 1 5/16in. high 1/9 4275, Jack Type . 10/-  
966, 1in. high . . 1/3 866, Jack Type . 2/-  
405, 1in. high . . 1/- 966J, Jack Type . 1/6

## BIRNBACH CERAMIC CONE STANDOFF INSULATORS.

For easy mounting of Condensers, Coils, Tube Sockets and High Frequency apparatus by virtue of having a threaded hole and screw in the base.

430, 1in. high . . 1/3 432, 1 1/2in. high . . 2/6  
431, 1in. high . . 2/- 433, 2 1/2in. high . . 3/6

## BIRNBACH FEED THRU INSULATORS.

4234, 2 3/4in. high . 7/6 4234J, Jack Type, 12/6  
4125, 1 3/4in. high . 3/- 4125J Jack Type . 3/6  
478, 2in. high . . 2/6  
458, 1in. high . . 1/9 478J Jack Type . . 3/-

## BIRNBACH ALUMINIUM 5 METER 4 SECTION DOUBLET ANTENNA.

Each section adjustable 26in. to 42in. Can be rotated to any degree of Polarization. Impedance at centre 72 ohms matched by EO1 cable. Aluminium tubing permits outdoor mounting and special lock bushings hold each section in place. 4 1/2in. Insulator provides mounting for two 1/4-wave antennas. Write for specification of special EO1 Cable also available.

No. 159 at £2 nett. EO1 Cable, price on application.

Send for illustrated Folder of Birnbach.

**Australasian Engineering Equip't.**  
370 LITTLE COLLINS STREET - - - - MELBOURNE

# AMATEUR RADIO

Published by the Wireless Institute of Aust., Victorian Division.

Vol. 6 No. 11

1st NOVEMBER, 1938.

## INDEX

Editorial	3	Federal and Victorian QSL
A Crystal Controlled Transmitter for 56 M.C.	4	Bureau
Batteryless Operated Reiss Microphone	5	Divisional Notes
The Modern Modulator	7	New South Wales
Contest Section	10	Victoria
28 and 56 M.C. Notes	12	Queensland
DX Notes	13	South Australia
		Western Australia
		Tasmania

## Divisional Addresses:-

FEDERAL HEADQUARTERS	...	BOX 2127L, G.P.O., SYDNEY
NEW SOUTH WALES	...	BOX 1734JJ, G.P.O., SYDNEY
VICTORIA	...	BOX 2611W, G.P.O., MELBOURNE
QUEENSLAND	...	BOX 1524V, G.P.O., BRISBANE
WEST AUSTRALIA	— ROOMS 2 & 3, MELBA CHAMBERS, Cor. HAY and MILLIGAN STREETS, PERTH.	
SOUTH AUSTRALIA	...	BOX 284D, G.P.O., ADELAIDE
TASMANIA	...	BOX 547E, G.P.O., HOBART

## Magazine Committee:-

Editor—W. R. GRONOW (VK3WG).  
Technical Editor—R. H. CUNNINGHAM (VK3ML); Notes—C. SERLE (VK3RX);  
Compilation—V. E. MARSHALL (VK3UK);  
Secretary—T POWERS (VK3PS)

All Communications and MSS. should be forwarded to the Editor, "Amateur Radio," BOX 2611W, G.P.O., MELBOURNE.

Subscription to "Amateur Radio" is 6/- per Annum (Post Free), paid in advance.  
Should you not receive your copy of "Amateur Radio," notify your Divisional Secretary at once.

Advertising and Publishing Office: Address Publicity Manager, "Amateur Radio," Whitehorse Road, Box Hill, E.11. 'Phone: WX 2429.

NOTE.—ADVERTISERS' CHANGE OF COPY MUST BE IN HAND NOT LATER THAN THE 20th OF THE MONTH PRECEDING PUBLICATION.

Submit Your Instrument Problems to us



**SIEMENS  
ELLIOTT  
INSTRUMENTS**

For Every Requirement

---

**SIEMENS (Australia) Pty. Ltd.**

**SYDNEY**      **MELBOURNE**      **BRISBANE**      **ADELAIDE**  
**NEWCASTLE**

**H. G. Little & Co. Perth:**      **W. & G. Genders Pty. Ltd. Tasmania**

---

**Agents for THE ENGLISH ELECTRIC CO. LTD., LONDON.**



# — EDITORIAL

## THE LESSON OF CAIRO.

The results of the International Telecommunications Conference held at Cairo are now so well known as to require no further elaboration. The item of most concern to amateurs is the allocation of frequency bands, and, briefly, the changes which will affect us in Australia are the sharing of from 7200 to 7300 kc. with short wave broadcasting, and the probability that we shall be allotted a specific band at 112 mc.

Whether frequencies in the range 7200-7300 kc. will be allotted to Australian broadcast stations we cannot say, and it is even possible that in some countries amateurs will be denied the use of this part of the 7 mc. band. However, Federal Headquarters has already made a strong plea to the P.M.G.'s Department for the retention of the whole of the 7 mc. band as exclusively amateur territory in this country, and we have hopes that the Department, which has always been friendly towards the amateur, will view the proposal in a favourable light.

Even if the outcome of the Cairo Conference affects us but little, it is imperative for us to remember that the next conference is to be held in Rome in only three and a half years' time, and then the demands made on the amateur frequencies will be even greater than they were at Cairo, where, but for the magnificent fight put up by the I.A.R.U. and the American Delegation, and to a lesser degree by the British Dominions, a part of each of our bands would have been taken from us.

We must face the fact that in many countries, particularly some of the major countries in Europe, the administrations are definitely antagonistic towards amateur radio. This is simply because they cannot appreciate the value of it in relation to other services.

It is very necessary for us, therefore, to seize every opportunity to make amateur radio a thing of value in the community. The main reason why the amateurs of the U.S.A. are regarded more favourably by their Government than those of any other country is their excellent work in time of national catastrophe, such as floods, etc., when other means of communication fail, admittedly such catastrophes are rare in Australia, but should any such opportunities to serve occur we must not be slow to take advantage of them.

It is true, however, that the majority of engineers and technicians in the industry have been drawn from the ranks of the amateurs, and it is this aspect which should most be stressed when pointing out the value of the amateur to the Government. Amateur radio is the training ground for a large army of technical men who equip themselves at their own expense for research and development work in radio and allied sciences, and this alone must be of great value to the nation. Furthermore, in the event of war, the value of a trained army of radio operators is incalculable.

Finally, and this is possibly the amateur's greatest contribution, although it may be difficult to express the idea convincingly to a Government, the amateur, by the establishment of friendly contacts with others in all parts of the world, does much to further the cause of international amity and world peace.

It is a significant fact that the countries in which amateur radio flourishes best, and is valued highest, are the great democracies of the U.S.A. and the British Empire.

—Federal Headquarters.

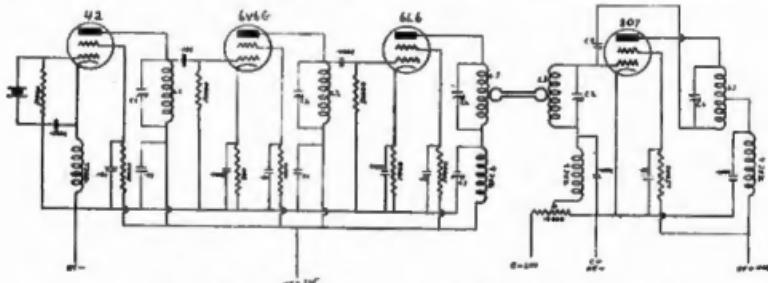
# A Crystal Controlled Transmitter for 56 m.c.

(By VK3PS.)

In designing this transmitter the two main factors for consideration were economy and efficiency. In the first instance the number of tubes with their relative circuits had to be reduced to a minimum and in the second the amount of drive available and the difficulties often experienced in modulating a doubler stage and coupling it to the antenna were the main considerations.

Several circuits and arrangements were tried, particularly with a view to obtaining output on 56 mc from

amplifier from the third plate, but so many difficulties arose through compensating capacities that the third plate was earthed and link coupling used. When changing over to a standard variable condenser, the r.f. output dropped considerably and many values of by-pass condensers were tried without success until a 7 plate midget variable solved the problem; this is shown on the diagram as C3 and is set with the plates slightly more than half meshed, this capacity is very critical for maximum output



a 40 metre crystal with two tubes and although this was accomplished, the output was not great enough to drive an amplifier efficiently, hence these circuits were discarded in favour of the one shown here.

To gain efficiency, regenerative circuits are used throughout the oscillator and multiplier stages and are found to be quite satisfactory. The oscillator functions on the fundamental crystal frequency and the crystal current is in the vicinity of 20 m.a. The Second stage quadruples to 10 metres. Ample r.f. output is obtained from the 6V6G, but even greater drive may be obtained from a 6L6G. If this latter is used, the cathode resistor may be increased to 1,000 ohms and the screen resistor to 50,000 ohms.

In the original lay-out, aluminium plates as used in the Jones stabilised oscillator were used with the intention of driving the grid of the power

and does not act as a compensating capacity with the tank condenser. A 6L6G was tried in this stage, but was found most unsatisfactory, the r.f. output being only one third to half of that of the metal tube.

The link coupling to the final stage consists of a single turn 1 inch in diameter mounted around the last turn at the "cold" ends of the doubler tank and amplifier grid coils. These links are connected by parallel wires, 14 gauge, and spaced  $\frac{1}{4}$  inch between centres, they are 7 inches long.

The grid circuit of the amplifier is mounted under the subpanel and the plate tank is mounted on a bracket close to the plate cap of the tube and contrary to expectations there is a definite tendency to spurious oscillation unless the tube is neutralised. The neutralising condenser consists of two strips of aluminium mounted on stand off insulators and the spac-

ing between them is 3-16 of an inch. The actual setting is such that the top plate covers a triangular corner of the lower plate, the sides of the triangle being about 3-16 of an inch. This condenser is shown on the diagram as C4.

Bias for the power amplifier is obtained from a 200 volt power pack through a 10,000 ohm wire wound potentiometer. The value of bias used is in the vicinity of 120 volts.

This transmitter is capable of handling an input of 32 watts with 19 watts output and has proved very satisfactory in actual operation. The modulator described in this issue is eminently suitable for use with the transmitter. In the power supplies 150 m.a. rating chokes should be used as the first three stages which are supplied from the one source draw 110 m.a. and the amplifier requires an average of 80 to 90 m.a. The voltages stated in the diagram are measured at the output side of the power supplies under full load and in the case of the first three stages a reduction in voltage caused a considerable decrease in efficiency.

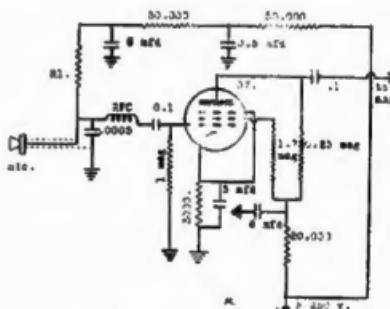
The first three stages are built on a sub-panel measuring 13 inches x 6 inches, and the amplifier on a similar sub-panel 12 inches above the lower one.

L1, 12 turns 18 g. on 1-1/2 inch former close wound. L2, 6 turns 14 g. 1-1/2 inch diameter 1-1/2 inch long. L3, 5 turns 14 g. 1/2 inch diameter 1-1/2 inch long. C1, 17 plate midget. C2, 18 m. mfd. C3, 7 plate midget—see text. C4, see test. RFC1, Standard short wave choke. RFC2, 75 turns 32 g on 1/2 former.

causing lower output and adding to the hiss and noise of the mike itself.

The window need not be larger than 1-1/4 inches x 2-1/2 inches, and the chamber should not be more than 1-1/2 of an inch deep. Gold plated electrodes are reputed to be less noisy than graphite or carbon electrodes, but unless the plating is 9 carat or higher, the noise produced by them will not be much lower than well polished graphite or carbon electrodes.

The circuit itself is self explanatory, the only part to exercise great care in selecting is the resistor marked R1; this resistor should be of the wire wound type otherwise the noise caused by the current passing through it will be objectionable. The value of this resistor is 5,000 ohms, which seems to be the happy medium because the resistance of this type of mike varies considerably. The mike being resistance coupled to the 57, there is no trouble with induction hum as is experienced with transformer coupling, and the quality is improved.



## Batteryless Operated Reiss Microphone

(By VK3JX.)

One of the most annoying things to find in the shack is a flat mike battery. This article describes a method of overcoming this evil.

Before describing the circuit, let us consider the mike. As the layer of granules next to the diaphragm is the only one to move to any great extent it is obvious that all layers behind become mere shunt resistors

The 57 used as a pentode AF amplifier provides sufficient gain to lift the mike output to pickup level when taking in normal voice at a distance of 1 foot. Closer talking gives greater output, but the breath impinging on the diaphragm causes lots of noise and impairs the quality of the speech.

Single core shielded wire may be used for mike lead if it is not subjected to excessive use, as in portable work, because should the shield become badly twisted it will cause noises. The RFC 1 meg grid leak and the 57 valve should be well shielded to prevent RF feedback.

# The Most Complete Analyser I've Ever Known.. and Super Sensitive



Weston Model 772 (Type 2) is the most complete and super-sensitive analyser on the market today. Designer for all types of service -- radio and television receivers, transmitters, P.A. Systems, vacuum tube and cathode ray equipment, sensitive telephone and telegraph relay circuits-- its measurements of AC and DC volts, DC current, ohms and decibels over broad ranges fulfill every servicing requirement.



Write or call for literature and full particulars. Enquiry entails no obligation.

Volts.	Decibels.
A.C. and D.C.	-14 to plus 2
2.5	-2 to plus 14
10	-12 to plus 28
50	-26 to plus 42
250	-38 to plus 54
1,000	Ohms.
Current.	0-3,000
D.C. only.	0-30,000
.1 Ma.	0-3 Meg.
1 Ma.	0-30 Meg.
10 Ma.	
50 Ma.	
250 Ma.	
1 Amp.	
10 Amp.	

## WARBURTON FRANKI (MELBOURNE) - LIMITED

380 Bourke St., Melb. MU6353. Also at Sydney &  
Brisbane.

## The Modern Modulator

(By C. Serle, VK3RX.)

No controversy in amateur ranks has produced such heated discussion and mutual recriminations as has the Phone versus CW argument.

In U.S.A. the amateurs have been well served by the manufacturers in the matter of modulation equipment and phone occupies a definite position in American ham activities.

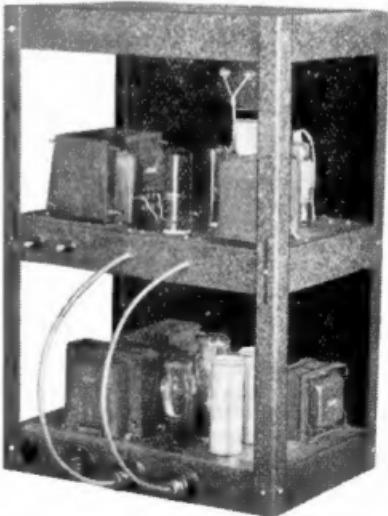


A great deal of the hostility with which phone has been regarded in Australia has been due to what QST termed "Rotten Radio"—the unintelligent operation of obsolete and unsuitable gear.

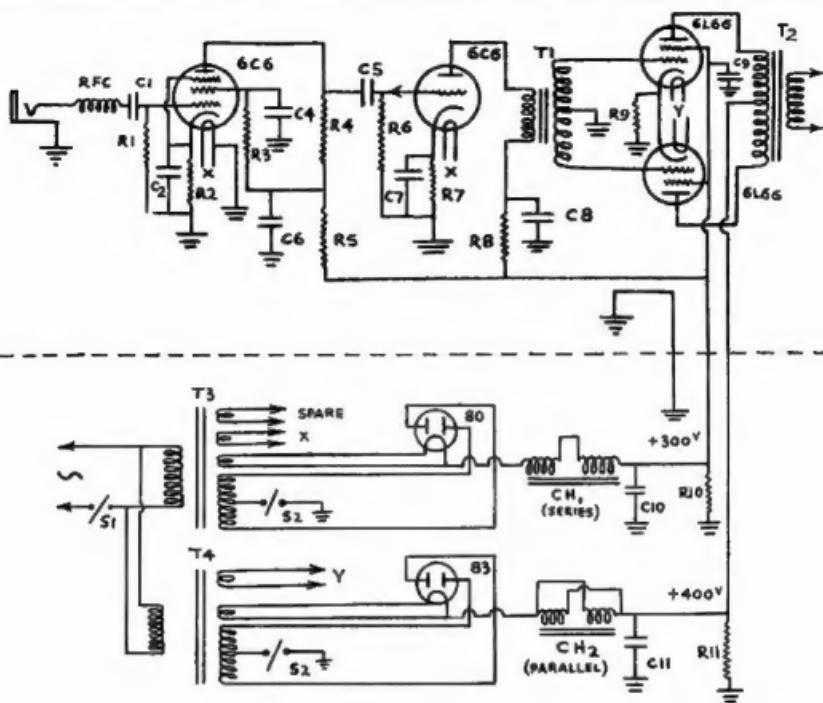
To secure sufficient audio power to modulate a 50 watt carrier it was decided to use a pair of 6L6G tubes in push pull. Operating in Class AB1, the output into 6600 ohms load is 32 watts at plate and screen voltages of 400 and 300 volts respectively. Any amplifier is only as good as its output transformer and most of the credit for the success of the modulator shown here must be given to the "ABAC" variable ratio modulation transformer, which was designed specially for ham use by 3PT and 3HC. By selection of the proper terminals the output can be matched

into any Class C rf stage impedance from about 600 ohms to 19,000 ohms.

From the photographs it will be seen that the modulator is divided into two units. The power supplies occupy the lower chassis, whilst the modulator proper, with driver and output transformer, fills the middle chassis. A third blank chassis forms the top of the rack. As advertised, the rack and chassis are available in kit form from Trimax Transformers Pty. Ltd. A steel cover plate shields the underneath of the amplifier chassis in order to remove the last trace of hum caused by the proximity of power transformer and choke fields to the low level stages. When this plate is installed, it is possible to leave the microphone jack open and with the gain control full on, hear no hum in a high fidelity speaker correctly matched to the 6L6Gs.



The modulator circuit is quite straightforward and comprises one 6C6 pentode resistance coupled to a 6C6 triode. This output is coupled with a driver transformer to a pair of 6L6G's.



LEGEND

C1	.1	mfd.	R1	.5	meg.
C2	25	"	R2	2,000	ohms.
C3	.1	"	R3	1.5	meg.
C4	.1	"	R4	.25	meg.
C5	.1	"	R5	50,000	ohms.
C6	.5	"	R6	.5	potentiometer
C7	25	"	R7	1,000	ohms.
C8			R8	10,000	ohms.
C9			R9	200	175 m.a.
C10	.8	"	R10	15,000	
C11			R11	15,000	10 watt
				RFC	2.5 m.h. rf. choke.

CH1	TZ3
CH2	TZ3
	Parallel
T1	Driver
T2	Output
T3	385 volt
T4	500 volts
CH1	TP.59
CH2	TP.78
All	TP.115
transformers	mfd. by
	Trimax

Two separate power supplies were found necessary to provide good regulation and a special driver transformer T1 with a low resistance secondary, was used to keep the distortion low at full output. These precautions were justified by the fact that practically every station worked has commented on the quality and absence of distortion.

One power transformer T3 delivers 385 volts per side into an 80 rectifier. With choke input this pack supplies 300 volts to the preamplifier and 6L6 screens. The other transformer, 500 volts per side, uses a 83

rectifier and a similar choke, but with an input inductance of  $7\frac{1}{2}$  henries the two windings in parallel giving at twice the current rating of CH1. Special note should be taken of the fact that neither supply uses condenser input.

The sockets along the rear edge of the power supply chassis are (L to R):—No. 1, spare 250/300 volts DC and spare filaments; 2, AC power filaments; 3, 300 volt positive and lead; 3, 400 volt positive and 6L6G negative and 6C6 fil. Rubber covered cables and Amphenol plugs with metal covers connect the two chassis.

the cable ends being soldered to lugs in an insulating strip mounted on bracket, spotwelded to the inside of the amplifier chassis.

The gain of the amplifier is sufficient to provide a full 34 watts output from the usual types of crystal microphones and the gain control is located in the grid circuit of the second tube. A r.f. choke is used in the grid of the first 6C6 to prevent pick-up and rectification of stray r.f. This first 6C6 is completely shielded, but no shield is necessary on the triode beyond the usual metal braid on the grid lead. As a precautionary measure the input and output leads of the 6L6G tubes were also shielded to remove any tendency to self oscillation.

Since the photographs were taken the layout has been slightly altered and glass 6L6Gs substituted for the metal type shown. The four tubes on the middle chassis are now mounted in a straight line parallel to the front panel and the driver transformer has been moved nearer the centre of the chassis. The line up is now, right to left (rear view):—Totally shielded 6C6 pentode, 6C6

triode, 6L6G, 6L6G. The input jack is mounted in the side of the chassis near the input tube. A milliammeter, if available, is connected in the positive 400 volt lead to the output transformer. The leads should also be shielded with earthed braid.

In wiring the modulator all earths should be soldered to a copper wire connected to the negative HT instead of relying on mounting screws for earth connections. The 8mfd electrolytics used for filtering plate and screen lead are the pigtail type and are mounted under the middle chassis. The two used in the power supplies are wet electrolytics 600 volt rating and are mounted near the rectifiers.

When using a dynamic or speaker type microphone, the output may sound "rumble" owing to the poor high frequency response of these microphones. To remove the predominance of bass the cathode bypass condenser on the first 6C6 may be altered to a .1 mfd which removes the bass almost entirely. The 25 mfd should be retained for music and

(Continued on page 27)

## High Voltage Microdensers

FOR RECEIVING OR TRANSMITTING.

CAT. No. 1094. 18 m.mfd.

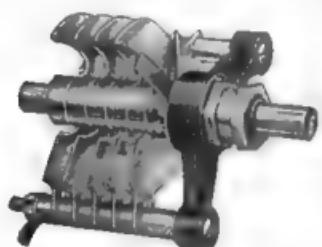
A highly efficient and compact condenser for short and ultra short wave use in transmitters and receivers. Brass vanes with moving and fixed sections soldered to spindles. Construction ensures constantly maintained capacity; very low minimum capacity, less than 3 m.mfd; adequate bearing support. Spindle extended for ganging. D.L.-9 low loss insulation and plates lacquered to prevent oxidation. Noiseless movement. Soldering tag connections,  $\frac{1}{4}$  in. spindle. Peak flashover voltage 3,500 volts. Easy to gang as capacity is matched within 1%.

PRICE, 6/6.

CAT. No. 1093. 60 m.mfd.

A low loss condenser of compact and solid construction, which is ideal for crystal oscillator plate circuit, buffer amplifier tank tuning and medium power transmitting tank circuits. D.L.-9 low loss insulation, reliable bearing, fixed and moving vanes soldered, terminal connections. Not extended for ganging.

PRICE, 8/6.



**R. H. CUNNINGHAM & CO.**  
94 ROBINSON ROAD, HAWTHORN, E.2.

## Contest Section

---

(R. F. Cohen, VK2TF, Federal Contest Manager)

The 1938 VK-ZL Contest is over! Maybe it is just as well, otherwise there might be quite an increase in the mentally deficient population—or are we mentally deficient anyway! To keep operating for 24 hours trying to balance countries with contacts and trying to copy that elusive country for an extra multiplier, through the bedlam on 14 mc., particularly near the high frequency end, was enough to paralyse all but the strongest ears.

Still, judging from the number of participants, we appear to be developing a race of people with ear drums at least half an inch thick.

To give everyone a chance of thoroughly recuperating and of repairing or rebuilding the rig that broke down at the crucial moment—and there were one or two of these—we have decided to hold the National Field Day on the 3rd December and the All Band C.W. Contest on the two week-ends commencing the 10th and 17th December.

For the National Field Day intending contestants should notify their divisional secretary re location and call as soon as possible.

### AUSTRALIAN NATIONAL FIELD DAY. Rules.

1.—The contest will commence at 1800E.A.S.T. on December 3rd and conclude at 1800 E.A.S.T. on December 4th.

2.—The contest is limited to portable stations operated within the Commonwealth and its Mandated Territories.

3.—A portable station shall be defined as one whose power is not derived from either public or private supply mains, and shall not be located in any occupied dwelling.

4.—Operation may be on any amateur bands, viz., 56, 28, 14, 7, 3.5, 1.7 m.c., and a station may be only operated on one band at any time. (Two or more transmitters are permissible, but only one to be used at a time.)

5.—No apparatus is to be erected on the site of the portable station earlier than 24 hours before the commencement of the contest.

6.—The input to the final valve coupled to the antenna shall not exceed 50 watts.

7.—A complete exchange of reports R.S.T. is necessary before any points can be claimed.

8.—For the purpose of the contest, N.S.W., Victoria, Queensland, South Australia, West Australia, Tasmania, Northern Territory and the Mandated Territories will constitute districts.

9.—Contacts within a district are not allowable.

10.—Points will be awarded as follows:—

- (a) For contact with a fixed station within the Commonwealth, outside competitor's State—1 point.
- (b) For contact with a portable station within the Commonwealth, outside competitor's State—4 points.
- (c) For contact with stations in Asia, North America and Oceania outside Australia—5 points.
- (d) For contact with stations in Europe—7 points.
- (e) For contact with stations in Africa and South America—10 points.
- (f) A bonus of 25 points for each continent worked on each band shall be added to the total score. The extent of each continent to be decided as per official I.A.R.U. W.A.C. Map.

11.—Logs showing the station worked, date, time, band and power used, signed by the operator or operators shall reach F.H.Q. not later than 31st December, 1938.

12.—Contestants to use the letters W.I.A.N.F.D. frequently whilst calling to signify that they are portable stations.

(Continued on page 27)

13.—The decision of F.H.Q. in all matters pertaining to the contest shall be final.

14.—Awards: A special certificate will be awarded to the outright Australian winner by F.H.Q. and suitable certificates to the winning station in each State.

### THE ALL BAND C.W. TROPHY.

This year this contest will run on similar lines to the recent Fisk Trophy, that is, it will be an Interstate Test and not an individual one as previously held.

The Trophy will be competed for annually, and will be awarded to the State having the highest aggregate score of its first three competitors.

The scoring system always seems to confuse some competitors, so a formula has been arranged which should clear up any misunderstanding.

The grand total score equals:—  
(A x B) plus 50C, plus 20D, plus 20E, plus 30F, plus 100G, plus 500H. Where A equals number of contacts, B equals number of States worked, C equals number of States worked on 160 MX., D equals num-

ber of States worked on 80 MX., E equals number of States worked on 40 MX., F equals number of States worked on 20 MX., G equals number of States worked on 10 MX., H equals number of States worked on 5 MX.

The above formula will give the score claimed by any station in the contest.

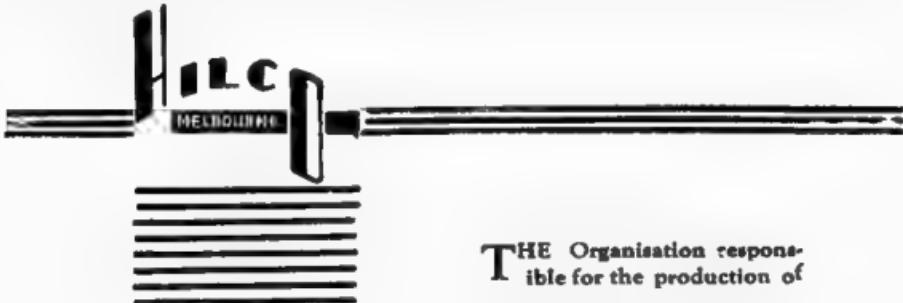
Rules are as follows:—

1.—The contest is open to all licensed amateurs, but only members of the Wireless Institute are eligible for awards.

2.—The times of the contest are as follows:—From 1400 E.A.S.T., Saturday, 10th December, until 2359 E.A.S.T., Sunday, 11th December, 1938, and from 1400 E.A.S.T., Saturday, 17th December, until 2359 E.A.S.T., Sunday, 18th December, 1938.

3.—The test is of a contact nature and with each contact a 10-letter cypher must be exchanged before a point is scored.

4.—Stations with which an entrant can work are stations in Australia and New Guinea, outside the competitor's own State.



The Power  
Equipment with a  
Powerful  
Reputation

THE Organisation responsible for the production of  
**Hilco Transformers**  
Chokes etc.

has proved its high standards for an article of extreme merit as accepted by the largest consumers in Australia.

All Products Guaranteed for twelve months.

**Hilco Transformers Proprietary Limited**

97-111 Berkeley St, Carlton N.3, Vic Phones F 1661-2  
CABLES & TELEGRAMS "HILCOY" MELBOURNE

## 28 and 56 M.C. Notes

(By A. Pritchard, VK3CP.)

Ten metres is being affected by the sunspot activity at present, giving very strong signals from the west coast of the States, but high speed fading with its consequent phase distortion is spoiling many of the heavily modulated phones. The Europeans have faded out again, and at present are only heard occasionally; in fact, D4XJF is the only consistent cw signal here. Sunday, 16th October, the phones were very badly distorted, although two new phones had plenty of strength around 9 a.m.—KA1ER and the South American LU8AB. The latter is often qso TI2FG, although usually inaudible here in VK. The contest made the cw portion of the band sound like old times, with many well known old-timers pounding the brass again on 10. VK3EG was heard at r4 here during the Sunday morning, and the W's were qso many VK's who had r9 sigs there, but due to skip effects were not heard in VK3. From New Zealand the contest had excellent support, and the following ZL's had powerful cw sigs:—XL1DV, 1BT, 1GX, ZL2GN, 2FA, 2VM, 2QA, ZL3JA, 3AY. ZL2VN has an interesting outfit, starting from a 6F6 co on 40 xtal, 6L6 doubling to 20 mx. Pair 6L6's Push doubling to 10; pair T20's PP buffer, pair 35T's final. The modulator has a 2A6, 56, 42's PP and TZ40's, class B. The antenna has  $\frac{1}{2}$  waves link coupled at a current node and all untuned. A 10 tube super completes a nice outfit. ZL1GZ reports the South Americans having good strength from 8 a.m. until 1 p.m. during the weekends, with LU7AG on 28 mc. and LU3NK on 29 mc. both phones. Saturday, 8th October, at 2 p.m. K6LCV had r8 phone qso ZL1GZ and 3KZ, but it is the first time ZL's have been inaudible here when receiving good reports from that distance. ZL1GZ also has an interesting rig, having a 6L6 co and a 20 mx xtal, pair T20 P. Push doub. feeding a pair of HF 100's to 100 watts. The final has good efficiency, for with

1250Y. on the plate the plate current at resonance dips to 16 mils!

VK3BQ is getting good contacts with South Africa, and on Sunday, 18th September, qso ZS6EG, ZS6A, ZS6EF, ZE1JG and also FB8AA on 28020 kc. VK3XP also contacts many Africans and heard YV1AP and G6RB. VK3FL has perfect phone and Lester has a nice outfit permanently on 10 metres. The rig has a 42 as co and 40 xtal, an E13 doubling to 20 mx, a 46 as buffer on 20, 6A6 paralleled, doubling to 10 mx and a 6L6G final with 50 watts modulated by a pair of 50's. VK3BG isn't having any trouble with contacts with the States. The W stations have been heard calling VK4JP and 4HR. VK6LW and 6ZO, both cw, have been heard over the weekends, also 2GU's phone which is usually fading badly. On Sunday, 25th September, K6OQM was heard qso PY2AK, also FB8AA on cw at 4.30 p.m., had fair signals. K7PQ was contacted on Sunday, 2nd October, at 2 p.m., and informed me he is on the look-out for VK contacts. NY1AA's 20 mx cw harmonic was r6 at the same time. Portable W6NWK is on his way to VK6 so will probably look up the 10 mx gang there. VK3KX at Colac was heard 559 qso VU2FS at 5.30 p.m. on Sunday, 2nd October. VK3GQ, of Camperdown, called in, and after hearing the band full of r9 sigs and all easy to contact, is on the job hot and strong for a 10 mx rig—hi! ZE1JZ has excellent phone, and was heard qso 3BQ, 3XP, 2GU and 5ZU in a run. The 5 mx band should start to show results now that more cc is being used, making possible the use of selective supers and giving the lads a chance to hear any weak dx. In the past, one wobulator would cover half the band with ac hash, and apart from being absolutely untelligible on the better supers, spoilt the band for others. I would be pleased if the chaps would send along the information for these notes well before the 18th. 73's.

## DX NOTES

(By VK3MR.)

Both the Junior and Senior Contest is over. The band goes dead on the tick of midnight, except for a few who are just completing the last qso which usually happens to be another multiplier! Weary hams pull the big switch and hit the hay, perhaps to work (in their dreams!) all the rare ones that were missed during the test. But the following night finds them all on the job again trying to get the scores of the other competitors. It will be very hard to nominate the winner this time, as so many seemed to be having their share of the dox. The only scores to hand at the time of writing are VK4BB, about 44,000; and VK3KK, 27,000. 3KX, unfortunately, could not spare all the time the first weekend. It becomes necessary once again to bring before the notice of those whom it concerns, that all those stations working out of the band and with crook notes have been "booked," and as 14,400 kc. is the end of the 14 mc. band, it will be hard to explain why higher frequencies were used.

Our dx hound from Abermain, VK2DG, complains that dx is not so good, as he only had 735 contacts during the Memorial contest, working only 84 countries for a score of 47,040! He has now 97 countries verified, and is keeping the postman busy bringing certificates for various accomplishments in the dx field! Considers it was worth while, as he worked five new countries. What some hams will do for a new country! He mentions that LX1AX is working under cover, and for hams not to qsl until they receive his card

To work S. America is no trouble to Keith, and reports working the following: — LU6DG, 14370 kc., 1930; T8X, HC1PZ, 14420. 1600; PY5QJ, 14400 kc. 200. T4; LU4AG, 14270 kc., 2030; CX1BG, 14425 kc., 2030. You will notice that outside of the H.F. end of the band is still the happy hunting ground! For those who are keen on the Century Club, G8DO is a new country, being in Guernsey. Ron, 3KX, has received his certificate for this award, and is very please. You should be! TG9HA, 14000 kc., workable about 6 p.m., is a rare one for the chasing.



# QSL CARDS

Printed in one or two colors on White or Tinted Board.

Any design or combination of colors.—Make your QSL's express personality.

### COMPLETE PRICES.

ONE COLOR Ink, on White or Tinted Board:—

250	12/6.	plus S. tax 8d.	£0/13/2
500	15/-	" "	£0/15/1
1000	22/6	" "	£1/3/8

TWO COLORS in Ink, on White or Tinted Board:—

250	18/9.	plus S. tax 11d.	£0/19/8
500	22/6	" "	£1/3/8
1000	33/9	" "	£1/15/5

WE PAY POSTAGE.

Prompt, Efficient Attention.

Write, enclosing copy and remittance to—

**ELSUM  
PRINTING  
COY.**

1025-7 WHITEHORSE ROAD,  
E.11, MELBOURNE.

## Federal and Victorian QSL Bureau

(R. E. Jones, VK3RJ, Federal QSL Manager.)

Log forms for the recent VK-ZL dx contest may be had on application to this bureau.

Would the ham who wrote to the bureau and enclosed stamps for forwarding of his cards please supply his call sign. He omitted this essential in his note, which was written on the back of a used envelope.

The QSL manager for VK6 is now VK6CP. Hope you like the job, Clarrie.

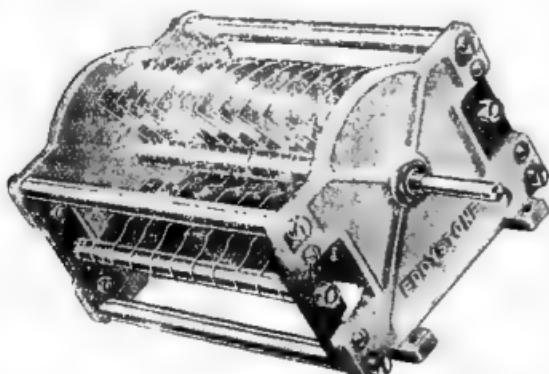
CT1PM, Francisco Antonio Rodrigues, Evora, Portugal, writes requesting me to endeavour and obtain a QSL from VK3XD and VK2ADE in confirmation of his QSO's. He needs them, or one of them, for his WAC. It's up to you 3XD and 2ADE.

VK3BS, long given up as lost, is active again from Montmorency. Allan, with a rig ending in PP 10's, is using 14 mc and anxious for reports.

W9AMP, Don Brickey, Armington, Ill., U.S.A., sending a bundle of QSL's, writes, "I can no longer afford to send QSL's direct, but have always done so in the past. Have QSL'd 81 VK stations and received 4 cards in return and feel bad about it." Look to it chaps. In an article in September, 1938, QST a summary of QSL's sent and received is given by a contributor. VK figures very low in that summary.

W1APU, H. D. Bamford, Dover Foxcroft, Maine, U.S.A., requests the (Continued on page 26.)

## EDDYSTONE SHORT WAVE COMPONENTS TRANSMITTING CONDENSERS



Cat. No. 1078.  
.0001 mfd., 60/-

Cat. No. 1080.  
40 x 40 mfd.  
Split Stator, 66/-

7000V. PEAK TYPE.

AVAILABLE FROM SYDNEY'S HAM STORE

**PRICE'S RADIO SERVICE**  
5 and 6 Angel Place, Sydney.  
CATALOGUES AVAILABLE FREE.

## Divisional Notes

To ensure insertion all copy must be in the hands of the Editor not later than the 18th of the month preceding publication.

### N.S.W. Division

#### ZONE 5 NOTES.

(By VK2IG.)

Plenty of qrm now in evidence on account of the VK2 test, but not much outstanding DX coming through except perhaps VR4AD being a new one for man. Some South Americans at R4 or so include CX, LU, OA, HK.

VK2AP—Is leading the Albury field for activity outside the contest with his skeds. Is also dabbling on ten with various results.

2OJ.—Has his European beam going fb. and also had his first ten metre fone qso at R8 with K6. Fb. Noel.

2IG.—Also in the fun on ten, es had three way DX contact with 2OJ and 2AP. Hi!! hi!!

2AFD—Down at Loverton, is learning more than code, we think, eh Angus?

2EU.—Flat out taming speech amplifiers, and not on the air much.

2VK—Still patrolling Australia's coastline in his steam boat.

2AED—On 20 mx working the DX in good style.

2AKE.—Is about 26 miles from Yass at Rye Park, is getting out well on 40 mx. Jim has been on about two months, and has worked most VK States and ZL, and this on super power. The xmitter is a 19 xtal osc. freq. 7032 and 19 PA, giving about 2 watts from batteries. The antenna is a doublet and the receiver a screen grid detector SP2 and one stage using a 2DX tube. So Jim must be congratulated on some real good work.

2OE.—Also busy on 40 and 20, uses a 6L6G in a tritel and 6L6G buffer and 809 in the final. Has some fine DX on 20 mx and believe he has been on ten with doubtful

results, hi! Rx is a 3 tube TRF and the old Zipp takes the strain. Believe 2DO also uses an 809 with good results.

Last, but not least, congratulations to the hams who started the Junior Test on the wrong day!!

#### ZONE 2.

2HV and 2ZP recently participated in the attempted all States hook-up on 40 metres. Unfortunately VK5 and VK7 were not heard, although VK2HV (Key Station), VK's 2ZP, 2VU, 3CO, 3JE, 4HU, 4MF, 4XY, 4DK, 6LH, 9WL, 9RC, 9DK and Papuan station 4KC and 4KT completed the circuit. This test proved to be very interesting, and all who took part are eagerly looking forward to the next attempt. Credit is due to 9WL for bringing in the Papuan stations, and for receiving 6LH 100 per cent, right through. 9RC did a wonderful job in putting out a good R7 signal with 1.5 watts derived from two discarded BCL batteries. Many stations hooked up again after the round table, and from dope received had some extremely enjoyable chats. Thanks for the co-operation, fellers, and we sure did have a time.

2AFS and 2AGL, not to be outdone, were recently heard participating in an eight-way on 40. Bob puts two K.W. into the 245 and modulates the tube socket in series with the antenna. Hi!

2GM is working night and day in an endeavour to get the new rig finished before the end of the VK-ZL test. Jock will be on 20 and 40 phone and CW, but mostly after CW DX on 20.

2HV recently tried 8JK beam, but reports better results with half wave centre fed Zepp. ZB1J, LA1G, ST6KR, U9ML and VR4AD new ones netted during first week-end of VK-ZL.

# Amateur Radio

## COALFIELDS NOTES.

(By VK2KZ)

**VK2KE.**—Still qrt until New Year, guess your exam keeps you busy, but hoping to hear you.

**2KZ**—Doing a little dx now and again, in senior contest, in junior also, using a pair of 8JK antennas.

**2YO**—Away on holidays due to coal crisis, so doings are nil this month.

**2XT**—Have not seen you of late; has your qra changed yet?

**2DG**—Getting ready for the junior contest, using 8JK on Europe and Zeppelin antenna for all round; has a new shack, very nicely done up. You should win the Sir John Dunningham trophy, as you were the most consistent station I heard; good luck, OM!

**2PZ**—Built a speech amplifier using push-pull, had a little trouble with the phase-splitter tube. Rebuilding, using 807-807 in rf line up for 10-20 metres. Get on 20, OM, and let's hear you amongst the boys.

**2CW**—Doing a little on 40. Say, get on to 20, Bill. I believe you have "Y.L."-itis; don't let it get you down, OM.

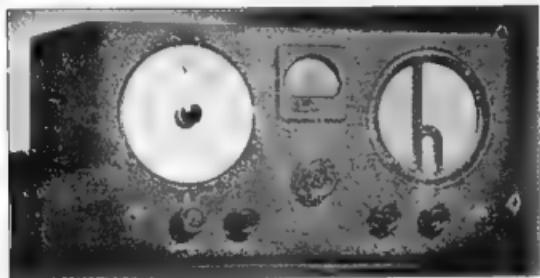
**2KQ**—A new arrival in this zone. Welcome, OM, and hoping to meet you shortly, using 80 consistently and always a good ragchew.

**2YL**—Using 20 regularly, also rebuilding to 807-809 combination; dx now 113 countries, using an 8JK to advantage now. Do not forget the return trip, and thanks a lot for combination. Appreciated, OM.

## WAVERLEY RADIO CLUB NOTES.

(By VK2AHJ)

The club has been having rather a busy time lately, both at its weekly meetings and its outside ventures. Portable transmitters have been built and rebuilt, and have, for the most part, been occupying the attention of the transmitting members, all for the purpose of making the forthcoming field day a success — and it was.



## Experimenters Operators Listeners!

BUY A

**Hallicrafters**  
(America)  
**SKY RIDER**  
COMMUNICATION  
RECEIVER

**SKY BUDDY.** 5 tubes, tunes from 16 to 550 metres; built-in speaker. (All models have universal Transformer, 110/250 volts A.C.)

**SKY CHAMPION**, 8 tubes, 7 to 550 metres, built-in speaker.

**CHALLENGER II**, 9 tubes, 7 to 550 metres, crystal filter.

**SUPER SKY RIDER SX 16**, 11 tubes, 5 to 550 metres, crystal filter, separate 12in. dynamic speaker.

**SPECIAL SUPER SKY RIDER, SX17**, 13 tubes, 5 to 550 metres, 2 stages pre-selection, crystal filter.

**ULTRA SKY RIDER** (tunes in 5 metre stations with same ease as lower frequency signals), 10 metal tubes, tunes 3.75 to 53 metres, direct dial calibrations, unique band spread system, iron core expanding I.F. trans., single signal crystal control.

**THE SKY RIDER 5-10**, 8 tubes, built-in speaker, RK1851 stage of pre-selection, covers 27 MC to 68 MC in two bands.

**SKY RIDER MARINE**, 8 tubes, built-in speaker, covers from 16 to 2,150 metres. Can also be had in AC/DC model.

**SKY RIDER DIVERSITY** has following advantages: Reduction of fading to negligible proportions. An increase of average signal strength over any single receiver. Improvement of Signal to Noise ratio over any single receiver. Reduction of Heterodyne Beat Note Interference. Has 25 tubes in all, covers from 545 KC to 62 MC in six bands. Two stages of RF amplification in each receiving section. Infinite adjacent channel rejector.

**PARTICULARS FROM AUSTRALIAN FACTORY AGENT:**

**Kilgariff's Agencies**

Box 1015J G.P.O. Adelaide  
South Australia, F2490

For the purpose the club adjourned to Narrabeen Lakes, and during the morning and afternoon of September 18, the members had great fun working actually portable. 2ABS's 5 watt portable excelled itself by working a VK4 and getting an R6 fone report.

Meanwhile at the club meetings the introduction of the new transmitter has been discussed, and adequate protection has been arranged in the interests of safety from theft. In due course it was brought to the club and put into operation. The occasion was that of the demonstration given by the club for a local social club. The activities of "hams" in general were explained very efficiently by Morrie Lusby, VK2WN, after which a ham station in operation was exhibited. The demonstration was well received by an audience of about 300.

To return to the new transmitter; the layout and constructional work was an eye-opener to the club members, some of whom had not seen it in course of construction. The line-up to date consists of 6L6G pentode c.o. with xtal switching and a choice of four xtals, all enclosed in a thermostatically controlled oven, followed by a 6L6G doubler, 6L6G alternate buffer or doubler and an 807 also alternate buffer or doubler. The final, yet to be added, will consist of P.P. 809's. Who sed 2BV was qrp?

On September 20th, the club welcomed two new members in Ivon Ballue (2TN) and Col. Paerson, a cousin of the writer. Col is anxious to tread the path to hamdom, and can rest assured that the gang will do their utmost to give him a helping hand. Ivon is an old-timer in the district, and at present is aiming at getting his rig so compact that it'll hang on a watch chair.

2MQ is still recovering from his recent operation, and it wasn't 5 months operation. He should very soon put in an appearance.

Jack Paterson, 2AFG, produced a very nice 3-tube portable receiver at the field day, and, apart from being pretty, it must have been very businesslike also, according to 2ABS.

The latter's activities have not been very great lately, and it was rumored that Jack was trading in his ticket for a replacement for a

busted P.E. cell. 'Zat so, Jack?

Leo Walters and Dave Halley have been the hard workers in the club these last few months, and have both helped Gordon Wells consistently with the new rig.

In concluding, I would like to invite anyone interested in ham radio to drop in at the club room, rear 13 MacPherson street, Waverley, and meet the gang, who will be only too pleased to welcome them.

## Victorian Division

### VICTORIAN PHONE MEETING.

Combined short wave and 200 metre fone section meet last Tuesday in the month, and all short wave fone transmitters welcome.

### KEY SECTION NOTES.

#### Members' Doings.

3WU.—Shortly be on with 809 P.A. Change of QRA the trouble.

3KR.—Busy Wednesday evenings with 3MR keeping 3WI on schedules.

3OG.—Up to his neck in rebuilding rig.

3DP.—Is losing sight of the fact that B.C.L. QRM is still prevalent.

3ET.—Still brushing up the A.O.P.C. Class code when not grinding xtals or repairing meters.

3ZY.—Took a quiet trip to Tassie, and was successful in landing announcer's job at 7BU. Congrats., Bill.

3ZH.—Works 40 dx wid a 59 Sturmoni osc. and a twisted pair doublet.

3XL.—Still rebuilding rack and panel. Hopes to be on the air again on c.w. November.

3AH.—QRL wid swot. Expects to be on daily from middle of November, and chasing pirate working his DX on 14 mc. Ambition is to pin him by ears to shark ceiling.

3EV.—Working regularly. Vy psed wid first W wid his 6A6 co-doubler.

3PJ.—Not very active.

3ML.—Is polishing up all available gear with a view to renewed activity in the R.A.A.F. Wireless Reserve.

3UK.—Has a mast to take down and vice versa, to put in a new halyard. Any helpers? A full overhaul of portable gear is underway in preparation for the National Field Day.

3JM.—On 14 mc. c.w., but hoping

to be on fone soon. Full of beans for reorganised R.A.A.F. work.

3VQ.—Amongst the dx again after a few months of grid phone.

3ZU.—Working duplex fone with 3SG.

3SG.—Working dx on grid fone and duplex with 3ZU.

3MR.—Off the air and rebuilding shack and rig, which will be something different.

3EQ.—All recent dx worked by car.

3UM.—Got exciter unit of new rig on air at last, and now contemplating a new recv'r.

3RJ.—Finding a little time for VK-ZL Contest.

3EX.—VY QRL.

3IG.—Now sets alarm for 6 a.m. and works early a.m. dx.

## U.H.F. SECTION NOTES.

(By VK3DH.)

As the news and doings of the active stations were excellently recorded in A.R. for October by our worthy chairman, 3JO, there is not very much to report this month.

In connection with the Wangaratta work on November 26th, we have a few more details to hand. 3JO, 3OT, 3VH, 3PS, 3ML, 3OF and yours truly are the staffons who have expressed their desire to take part and willingness to betake themselves to Wangaratta.

As only four stations will be required for the actual "circuit," we should have plenty of gear on the spot. Briefly the requirements are for four stations (one control at pits) to locate themselves around the course and by maintaining constant communication with the control station, will report cars as they progress around the track. Our services will be required from 2.00 p.m. until 5.30 p.m.

We do not know the distance around the car track, but we were told that the greatest distance between any two points would be about 1½ miles. Spare batteries are to be on tap at the scene of action, so there should be no power failure problems.

At the section meeting on September 20th, the above details occupied most of the general discussion period. Other items of interest include types of vibrators for use with portable 56 m.c. gear and the various me-

rits and otherwise of class "C" finals at this frequency.

As 3JO recorded in last month's notes, there has been a decided forward step in VK3 in the last few months; with the advent of crystal control at 3OT, 3PS, 3YL, 3DA and, of course, 3JO, who has had a 3-stage E.C. line-up for a matter of years now.

If we can all make an effort to have our permanent home transmitters, at least, crystal controlled in the very near future, I should say that with some organised interstate schedules (on CW for a start) we shall very soon see regular and perhaps reliable QSO's an accomplished fact.

It is true that the receiver problem has, up to date, been quite a large one, but with C.C. transmitters regularly "on the air," there is no reason why a standard communications type receiver that performs satisfactorily on 28 mc. cannot be fitted with 56 mc. R.F. (if any) and mixer coils. By making use of the 2nd harmonic output of the oscillator (already calibrated) a large part of the difficulty of locating the band is removed. Secondly, the C.C. transmitters overcome the selectivity problem, since it would be unnecessary to copy, in the case of phone, or follow, in the case of C.W., the broad unstable signals from a single oscillator transmitter.

And so here's hoping we shall very shortly know more of the behaviour of our 56 mc. signals at considerably greater distances.

## NORTHERN ZONE.

(3HX-3ZK).

We hear from members who are active on 20, there's still a little elusive DX about.

Old man QRM has been busy on 80 and 40, but there's still a few ZL's and VK's about on 80.

3TL—Still on 20. Believe 3BM blew along just in time to help with the W8JK beam.

3OR—Last heard of trying his luck at DX.

3EP is still having his share of DX.

3EC.—Taming a T20 and having fun with 83's. Local BC station comes in well. What say, Ern?

3BM.—Rising earlier and contacting G's.

# Amateur Radio

3CE.—Has been heard on 80 occasionally.

Ron (ex-7RC). — Still keeping Charlton B.C. station entertaining or annoying B.C.L.'s. Thinking of making a comeback. Don't think too long, Ron. Act!

3IV (ex-3EQ-2AGQ). — Now in Birchip; hopes to be making himself heard very soon.

3CH.—Turned up again after quite a long absence.

3AI.—It is rumoured Frank is to stage a come-back.

3IH.—Still making 6 watts go places. Has a brand new receiver, but results not satisfaction to date. Are they ever?

## WESTERN ZONE.

(By VK3HG)

The Western Zone dinner and convention has finally been fixed for the 26th and 27th November, and will be held at Colac. All members and non-members are welcome, and the more the merrier, so come along and have a swell time. But please advise either 3KR or myself if you are coming so that arrangements for accommodation, etc., can be made.

Conditions have undergone a change during the last month, and lately, due to the sunspots, have been very erratic indeed. The Europeans, who have been most consistent since May, have only been workable on occasions, although the closer DX has been more reliable. 28 mc. has shown some improvement and all continents have been heard, but rather weak and hard to raise.

3PE.—Working the DX in fine

style on 14 mc. phone and CW.

3KX.—Very active on 14 and 28 mc., and raising them in his usual style.

3TW—Got fed up with 14 mc. phone, and is now on 3.5 mc. and working the locals. Hope the B.C.L.'s give him a clear go.

3AC—Now in Swan Hill at the local B class station.

3JA.—Borrowed a generator and had a go in the contest, but found QRM too bad on his receiver. Has been working good DX at other times.

3FA—Active on 7 mc. CW and contemplating higher power and phone.

3SZ—On 7 mc. with lower power and getting out very nicely.

3OW—Working a few on CW.

3TN—Not on very much.

3HG—Improved the V beams and still working lots of DX.

## GIPPSLAND NOTES.

(By VK 3PR-DG.)

3IL.—Bob now on CC and getting out well with QRP fb om.

3WE—Bill has been successful in working W on 80 mx fone. Congrats OM. What about getting out of bed for Eastern zone hook up, Bill?

3SS.—Keith on again after some months of inactivity. Now in a new house with special shack for radio. Your quality not too good, OM.

3DI.—Jim still QRL service work, but heard he erected new stick to get sky wire up a bit, so it won't be long now.

3HZ-3XZ.—Where have you two

## BRIGHT STAR RADIO —VK3UH

### SAME DAY MAIL ORDER SERVICE TO ALL STATES.

CRYSTALS ground from the Best Brazilian Quartz and Tested to 50 watts input to Pentode Oscillator. Accuracy Plus or Minus 3 Kcs.

100 metre	15/-
80 Metre	10/-
40 Metre	21/5/-
20 Metre	£2

Variable Frequency Unit Special Holder and Crystal, 30/-.

Plug in Dustproof Holders, 7/6 each.

Satisfaction Guaranteed.

517 LOWER MALVERN ROAD,  
GLEN IRIS, S.E.6, Victoria.

Phone, U1218.

Scots got to? Working on five or what?

3ZJ—Now at 3UL as announcer. Hope hear you on the air soon, Jim, and welcome to the zone.

3EA.—Evan is a fisherman and spends most of his time on the water. How is the portable coming on?

3PR.—Fairly QRL, but manages to get on 80 mx occasionally. Ron has gone back to the old faithful 6P6 suppressor mod input about 4 watts.

3GO.—Graham on 40 mx again. We want you in the zone hook up om.

3VG.—On 40 mx cw, but hopes to have fone permit within a week or ~~so~~.

3QB.—Jack not heard of for months; must be after dx on 40 or 20 mx.

3NO-LY.—Too busy for words, let alone radio, hence the inactivity.

3DG.—Playing around with Vee Beam ant; since replacing feeders with ones that do not radiate has trouble to raise VIM with a better report than R5. Rebuilding PA and going in for plate mod.

## Queensland Division

The Senior section of the VK-ZL contest is over. Patchy conditions and terrific QRM due to short skips marked the experiences of the VIB gang who took part in the contest. In fact, it would be necessary to go back a few years to strike conditions bad enough to compare with those of the early morning hours during the last week-end. Over one period 4JX called CQ for three solid hours with no result. Jack was putting out an f.b. sig as no one will deny.

First place honours in Queensland will go to either 4BB or 4JX. The latter station managed around 180 contacts with multiplier of 39 countries. 4BB's score is not known. Bob always turns in a good log, and he won't be far from the top of the list.

4UL, 4UR, 4AW, 4JU, 4SA, 4HG and 4AP all stuck through the 24-hour periods and should have reasonably good scores.

The 10 mx band was not used to any extent by any of the above competitors. After the contest was over we learnt from 4HR that on

Sunday evening, 9th October, from around 8 p.m. the 28 mc band was wide open for European communication. 4HR states that conditions remained good until midnight, and he had no difficulty in contacting some 20 odd stations.

### 4WI Schedules.

The secretary announces that the 4WI transmissions are now in full swing. The frequency used is 7 mc and the times from 10.30 to 11.30 a.m. on Sunday. Country members are strongly advised to listen to the station, as much of interest is given out. A review of W.I.A. activities, news for country members, DX notes and morse instruction for student members are included among the features transmitted.

### Personal Items.

4JP looks like being Australia's No. 1 fone station before very long. W and ZS stations around 7 a.m. are no effect to George. Can hear some of the C.W. dx men saying, "don't believe it." Get up early om's. You'll find the proof around 14050 kc.

4JX has a universal exciter unit in mind. A good idea, Jack. We like the idea of E.C. control—but only in experienced hands.

4FB's portable xtal sig is really f.b.m. Fred works W stations on fone with it.

Heard 4GU calling a PY on 14 wc. All Dick needs for W.A.C. is a South American.

A new W.I.A. member is 4CN, of Cribb Point. Give him a shout, boys.

Good dx seems to be coming 4TK's way.

VK9MC is a new member and looking for VIB contacts.

4NO, Gladstone, is very active on 7 mc.

200 volts of "B" battery on a 41 xtal oscillator is all the power 4SN wants to work dx.

4RG, Brisbane, is on the look-out for country members. He puts out an f.b. fone signal on 7 mc.

4HR can tell a few tales about 10 mx dx, but prefers to keep 28 mc doings a close secret. Tibby uses an 807 final, the aerial is 2 half waves in phase, vertical.

4SA gets out very nicely. Heard plenty of rare ones calling him in the dx test.

# Amateur Radio

4HU is the latest to join the ranks of the 14 mc fone men. It's good fone, nicely modulated. A good antennae will put it in many dx countries o.m.

4AP has returned to 10 metres, and immediately added two more countries to his bag—CT1HK and 11MH. Think Alf's 10 mx total is now 40 countries.

4AW missed a lot of stations in the dx test. Build yourself a good RX, Arthur, instead of fixing up R.C.L. sets.

4RT didn't seem to get going properly in the dx test

Heard 4HA trying his luck on 14 mc the other evening.

4GK took little or no part in the dx tests. Things didn't seem quite the same with Mac out of it.

4KH will be on 14 mc fone before very long. No one doubts Bill's ability to rag chew.

Country members are again advised that notes for inclusion in this column must reach the secretary of the W.I.A. not later than the 7th of each month. This month not a line about country activity came to hand. Remember, 4HR in Brisbane is just as interested in your doings as you are in his. That applies to most hams. What about it, o.m.'s? Give us some notes if you want this column to "Wake up and live."

## South Australian Division

(By VK5KL)

October 12th affording a public holiday, the field day was held at Murray Bridge. Members met at the Institute rooms and proceeded to the scene of activity. Combining together a trip on the river was whilled away the first two hours of the day.

Results of transmitter hunt and other trophies are as follows:—Transmitter hunt, 1st, VK5KL (TZ20). 2nd, VK5LK (order for 10/6 on a city firm); member coming longest distance, VK5CJ (Narracoorte); best piece apparatus, VK5LK. These last two received gold medals donated by Mr. Walker (VK5WW). Many thanks are due to 5BF for supplying the hidden transmitter. Altogether there were 70 to present at the field day, which was a great success. It is our inten-

tion to hold another this month near at home, at one of our beaches, possibly Sellick's Beach, on a Sunday, and it is hoped that a good attendance will again prevail. Judging by some of the portable gear seen there should be a few entrants for the National Field Day next month. The five-metre band is again coming in for more activity. 5ZU is still keeping skeds with 2NO, and trying to get same with ZL by qso'ing them on 10 mx. 5HD's quality is good, resulting from a T20 doubler.

VK5JT is now on this band and has a hefty sig. on CW. So let's hope some DX will appear this summer. Well, all you country chaps, hope to see you at the Xmas dinner.

## VK5 COUNTRY NOTES.

For some weeks the main topic of conversation throughout South Australia has been the field day at Murray Bridge. Well it eventuated on Eight Hours' Day, October 12th, and what a time we had! Sturt Reserve was the site, and wore its most pleasant garb of green lawns and shady trees, with the cool waters of the mighty Murray flowing lazily by. The weather, neither too hot nor too cold. Everything was all that the most exacting could ask for. Now, what about some of the Country Gang who put in an appearance.

5CJ—Came all the way from Mt. Gambier, about 250 miles. The motor bike did the last 15 miles on one cylinder, the other having developed a crack. Colin and his friend, Mr. Jack English, decided to come on to the city whilst repairs were being effected. Started for home on the evening of the 13th and arrived at Mt. Gambier at 9 a.m. on 14th; worked all day, nearly asleep, and then had to travel about 30 miles that night to carry out some repairs to the light at Port McDonnell lighthouse. They have since had some sleep.

5LC, 5YM. Lance Catford and a friend came from along the mid-northern districts, and spent close on 24 hours out of bed. A front wheel came off one of the cars on the homeward journey, without any disastrous effects, however. Parts of a portable receiver were requisitioned to hold the wheel on for the remainder of the journey.

## Western Australian Division

(By VK6WZ.)

Darcy Hancock (5RJ) and Mrs. Hancock came along from Kadina, and appeared to have a good time.

5LR and his good wife travelled from Berri. Decided to have a feed of fish and chips on the way back home. Found that castor sugar instead of salt had been used as a flavouring.

5YL took a party off to inspect her station. Says she enjoyed the boat trip on the river as much as anybody, even though she spends some hours on the water every Sunday in her own boat.

5BF.—Frank was one of the busiest men at Murray Bridge all day. Carrying out programme arrangements, rigging up and operating the hidden transmitter, showing visitors his station, etc., kept him moving from daylight until dark. Frank and Mrs. Miller deserve a great deal of praise for the work they did to ensure the success of the day and for their hospitality.

5BG—Bob was on duty at commercial 5MU until 2 p.m. He then came along and met the gang. Later he was called upon to show a party of visitors his station.

Now a few notes from 5WG. Wally says:—

5LG.—Leith is one of the boys who always sends in his monthly doings; thanks, OM. At present using 50 watts input to an 809 and experimenting with antennae.

5NW.—Bob has been inactive lately. Let's hear from you, Snow!

5BK.—In the city recently, and reports having met a number of the City gang.

5HR.—Rumor has it that Bill is constructing again, and will be active again soon.

5KJ.—So you are an exponent of chess, George! Better give 5RT a call!

5TL—Tom can often be heard with a good sig from QRP.

5MP—Haven't heard you lately, Len; must be rebuilding, eh?

Our student members, Mr. Col Bottrell and Mr. Frank Trembath, are hard at it, and Lance Catford sat for the October exam. Good luck, OM.

Well, chaps, I guess that's about all the Editor will stand, so cheerio!

The Monthly General Meeting for October having been put forward from the second Tuesday to the third it is impossible to include in these notes anything dealing with the meeting since your correspondent is not endowed with occult powers and has no faith in astrology.

CondX have been poor lately with sunspots and ionised layers doing their combined worst at one stage (mid-month in October) to block out all but local and Eastern VK signals. 7 mc. is getting noisy, but is still popular with a few old-timers and most of the newcomers. 14 mc. is still the haunt of DX hounds—sunspots, etc., permitting.

6WI has been moved to another position in the "operating" room, but even this doesn't seem to have induced the transmitter to go on the air without an operator; looks as though someone will HAVE to stir up some energy and pound the key.

6BB is finding his National receiver a mixed blessing—lecturers are finding the subject "Modern Communication Receivers" a most desirable one, and it seems impossible to give such lectures without BB's NC-81-X as exhibit "A."

6MY and 6JS still threatening to come back on the air. What a shock it'll be when they DO!!!!

6HB heard on a lot wooing SWL's and BCL's with a "programme" and a very noticeable absence of VK in the callsign.

6YZ still waiting for 866's.

6HT, of Albany, on 7 and 14 mc. with 6MM as chief op. most of the time.

6AR doing wonders with a piece of wire strung along a fence; says Minding is fb QRA and can hear the world on 7 and 14 mc. Thinks it unlikely that P.M.G. regulations will allow him to put up a decent antenna—rotten luck, Bert!

6PK back from holiday trip to find his rx. power-pack stolen from shack. Miscreant took pack and left rx., meters, high-voltage trannies and so forth. Could have been worse, Perc, OM!

6FL of Geraldton apparently back on 14 mc once again, and doing well. How did you fare in VK-ZL, Frank?

# VEALLS

1938

# Radio Catalogue

Sixty Big Pages each 11in. x 8½in., containing thousands of items and hundreds of illustrations of Radio Sets, Parts and Accessories . . . . everything the keen radio enthusiast desires.

# NOW READY!

Write for your copy to-day, merely enclose a 2d. stamp to defray cost of postage and a copy will be sent by return mail.  
**AMATEUR TRANSMITTERS.**—If you hold the A.O.P.C. tell us . . . it's to your advantage. We will record your name on our special list and make regular mailings to you.



## VEALLS 6 BIG STORES

Address all letters to  
**BOX 2185T, G.P.O., MELBOURNE.**

490 Elizabeth Street, Melbourne.	—	—	—	—	—	F3145.
243 Swanston Street, Melbourne	—	—	—	—	—	C3059
168 Swanston Street, Melbourne	—	—	—	—	—	C10524
299 Chapel Street, Prahran	—	—	—	—	—	Wind. 1605
3-5 Riversdale Road, Camberwell	—	—	—	—	—	W1188
97-99 Puckle Street, Moonee Ponds	—	—	—	—	—	FU7822

**6AE**—24 hour service.

**6MW**—On now and again working fone D X with rotary beam.

**6LW** heard on Saturdays and Sundays on 7 mc. trying to fit in as many QSO's as possible in short time at his disposal.

**6LJ** back with rotary W8JK which started end-fire, but has now consented to work according to Kraus. Jack was so impressed with 6AF's vacuum tube keying that he decided to do likewise; results from both quarters vy fb.

**6SA**—Still putting out fb signs on 14 mc. and working DX with the best of 'em.

**6JC**.—Very busy, and on the air but rarely these days.

**6YL**, **6NL** and **6DF**—Anyone knowing the whereabouts . . . .

**6LY**—Transferred to country, and his QSL Bureau duties taken over by 6CP.

**6GR** and **6ZO** of Fremantle, heard occasionally keeping up the old traditions.

Will VK6's with anything of interest please get in touch with 6WZ so that dope may be included in these notes? Thanks!!

The winner of the August 7 mc Field Day was announced as VK6AF (30 points), with other competitors and their scores as follows:—VK6RW, 23; VK6BW, 22; VK6's GM, AB and DA, each 21; VK6BB, 15; and VK6KO, 14. The Field Day Committee's report was received, and the hope was expressed that although the Field Day had been a success, even more stations would participate next time. The Field Day Committee's next outing is due for November 6, and will take the form of a DF hunt for a hidden transmitter—tone and speech modulated and time of transmission to be from 10.30 a.m. to 1 p.m. Transmitter will be located within four miles of the Kelmscott railway station. Points will be awarded for finding the transmitter, neatness of equipment, portability, antenna system and design.

## Around the Bands.

3.5 mc. full of QRN, Commercials and "B" Class stations with (perhaps) unintentional short-wave relays (harmonics some call 'em), sometimes even possible to hear a ham sig there. 7 mc. also noisy, but

with more activity and only slightly less commercial and harmonic inactivity . . . a little DX o' evenings . . . stamping ground for newcomers. 14 mc. happy hunting ground for DX-ers, and except for a patch of bad condx in the middle of September yielding some pretty good DX.

28 mc. waking up here in the mornings between about 8 and 11 a.m., mostly W, K6, VK and ZL according to observation, gossip and reports . . . quite dead in evening hours . . . dark threats of impending activity on this band from several VK's.

Comments.—VK6SA still the most consistent old timer. Say, OM, we always thought you averse to fone—could pick your voice operating on VK6AG mobile—naughty, naughty! (VK6AG—another old timer—made a comeback on night of 18/9/38 with a stunt transmission from a car travelling about city and suburbs using 7 mc fone with 8 watts input on crystal control. SWL's were wooed in no uncertain manner judging by announcements). Another old timer in 6PK has just returned from trip abroad with YF—had good time among the "can-I-sell-you-a-nice-carpet-master?" blokes in the mystic East—load of pictures taken on his new Zless. 6GB still working good quality fone and clean c.w. mostly on 7mc. 6CP still active on 7 and 14 mc bands—has a real copper in 6HB, but recently arrived back in his home State after many years spent in other parts of VK. 6HB quite active on 7 and 14 mc with effective low-power rig.

VK6FL of Geraldton raking in the DX like nobody's business on 14 mc and heard on 7 for Sunday morning rag-chews with metropolitan chaps. 6HT of Albany heard called by Yanks and other fone DX on 14 mc frequently . . . skip prevents us hearing his sig. here in Perth. 6MW back again on 14 mc fone working old friends in the States. 6HS, a newcomer to fone doing well with VK and DX contacts; making fine fist of grid-modulation transmission. 6LJ back with knobs on and a rotary beam which draws forth much cheap wit from neighbours who think it a sort of chairoplane! My, the insults we suffer! 6WS also beam-conscious and has a nifty lattice tower erected on the roof all ready for the W8JK doings. 6BB discovered recently buy-

ing an acorn tube—expensive morsels! 6DF and 6NL and 6YL not heard much recently. 6ZO heard on 7 and 14 mc with good fone and bad c.w.—clicks that sound like power leaks. 6YZ still waiting patiently for 866's for his big rig. 6KW very pleased with his 50 watts to an 809—nice sig.

Parting shots.—Long CQ's and grandmotherly operating still persist in some quarters.

VK6CP is the new QSL officer for VK6, VK6LY having been transferred to country duty (and, incidentally, being QYL!). VK6CP's QRA, Mr. C. R. Cooke, 35 Beechboro road, Bayswater, W.A.

## Tasmanian Division

(By 7YL.)

The monthly meeting of this division of the Institute was held in the Y.M.C.A. rooms on the 11th. There was a fair attendance. The Northern Zone was to have held its meeting on the previous Tuesday, but as yet no news is to hand.

After much parleying, it was decided to hold a picnic for members, xylo, yls, etc., at Blackman's Bay on the 23rd. No gear is to be taken, but in place tennis racquets, cricket bats and balls, golf clubs and swim suits for those who so desire. Guess it is a little too cold down this end of the globe for swimming yet, but there may be a few game ones.

Mr. Hyland (7LP), the energetic social committee chairman, has been at work, and we are to have a picture show and supper at the Fire Brigade Hall. (Hope there is no fire that night.)



Conditions for dx have been exceedingly disgusting down south, especially during the two contest weekends. The local rag informed us that sunspots were the cause of the complete fade-out of 20 mx communication on the 9th. It certainly was a complete fade-out, for not a single dx station was heard from 0200 to 0800 hours—not even a Yank.

### Scandal

7AH.—Will not attend the field day as will be cruising on the family yacht. Had an attack of laryngitis last club night, so could say very little.

7CM.—Like most others in the senior contest called cq ad lib, but didn't work much. Is on most consistently. How about a key click filter, Charlie?

7HM—Is now settled in new qra and is trying to get shack ship-shape. Has oceans of room for year, and lots of play for antennae systems.

7JB.—Thoroughly disguised with senior contest. Threatens to sell gear and take up something which will cause him less headaches. Lots of sympathy, Buck, hi! Now has the Technical College station in operation, and worked 5TX on first try-out. Believe the Technical xmtr works fb.

7NC.—Has been doing some very consistent work on 14 mc and working some dx when it pops up.

7PA—Is too busy building new caravan to attach to the V8 for weekend trips to be on air much, in spite of many new tubes to be installed in rig.

7JH.—Occasionally visits VIH from Waddamana (power centre). Reports fair amount of activity but not much dx. Occasional J's and W's.

## CRYSTALS ARE CHEAPER!

The New Diamond Saw enables me to offer:

80mx., Low Drift	15/-
40 mx., Thick Cut	20/-
20 mx., Thick Cut	40/-

Prices for Special Types on Application

Immediate Delivery.

**Maxwell Howden**

(VK8BQ)

18 BALWYN RD., CANTERBURY, E.7  
Vic.

Maurice Burleigh is now stationed at the Paper Pulp Works at Burrie. Let us have some news, Maurice.

Have had very little news from the north—guess everyone must be very busy. 7AB heard being called in test now and again. Hope dx was a little brighter up there than it was down here.

7YL.—Tired of seeing things pass out at this qra. The modulation transformer is the latest to be added to the "has-beens." Such is life.

78's. Joy.

(Continued from page 14.)

publication of the following:—"W1APU is trying for 100 VK verified contacts. To date 83 VK's have been worked and 43 verified, just about 50 per cent. Will fellows that have worked W1APU and received his QSL send him one to help reach that 100 mark?" He adds that his idea of 100 verified VK contacts has been going for a period of 8 years.

A card and photo from SM6UA depicts the neatest and most busi-

ness like station the writer has yet seen. John Fr. Karlson, of Gothenburg, the owner and operator, is 73 years of age.

Cards for the undermentioned VK3 stations may be obtained by application to the bureau, 23 Landale street, Box Hill, in the usual manner:—AP, BE, BK, CA, CC, CU, CX, DA, DC, DD, DE, DI, DU, DZ, EA, EC, EH, EI, FK, FM, FN, FS, FZ, FT, GE, GM, GP, GU, HB, HE, HP, HE, HP, HS, ID, IL, IN, IR, JD, JL, JS, JV, JZ, KC, KG, KL, KP, KS, KY, LD, LM, LP, LW, NA, NF, NV, OI, OM, OQ, PH, PS, PV, PZ, QO, QT, RQ, RV, RZ, SC, SE, SF, SM, SO, SZ, TD, TG, TT, TU, TV, TY, UC, UN, UO, US, VN, VK, VY, WR, XC, XU, YM, YT, ZG, ZF, ZJ, ZP, ZR, ZL. The foregoing list appears in the February, May, August and November issues.

Cards are on hand for the following new stations whose QRA's are required by the burea:—VK3BP, CH, CO, DO, DD, EV, HT, IB, IF, IK, KK, MU, MJ, OQ, PF, PV, QC, QF, QG, QU, RA, SD, TE, UQ, VO, WT, XO, XH, YR, YW, ZS.

## 6, 12, 32, 110 VOLTS D.C. INPUT INTO A KINGSLEY POWER BOX

will give you

100 WATTS, OF 230 VOLTS, 50 CYCLE A.C. OUTPUT

EFFICIENT ————— SIMPLE.

Think what you can do with this Power—

RUN A TRANSMITTER;

RUN A KINGSLEY HIGH-FIDELITY RECEIVER, POWER-BATTERY SUPPLY; OR  
HOME LIGHTING.

We Build TRANSMITTERS, COMMUNICATION RECEIVERS,  
AMPLIFIERS, COILS, INTERMEDIATES.

**KINGSLEY RADIO PTY. LTD.**

316 LITTLE COLLINS STREET, MELBOURNE.

Factory: 247-251 Spring Street, Melbourne. Cent. 8461.

(Continued from page 9)

5.—Any station can be contacted once on each band, each week-end.

6.—States are as follows:—VK2, VK3, VK4, VK5, VK6, VK7, VK8 and 9 combined.

7.—Licensed power must not be exceeded, and infringements of the Postmaster-General's regulations may mean disqualification.

8.—One point is scored for each cypher exchanged. Total points are then multiplied by the number of States worked (as defined in Rule 6.)

9.—Bonuses will be added to the score after multiplying (rule 8.) The bonuses are as follows:—

Contacts on 160 MX.—50 points for each State worked.

Contacts on 80 MX.—20 points for each State worked.

Contacts on 40 MX.—20 points for each State worked.

Contacts on 20 MX.—30 points for each State worked.

Contacts on 10 MX.—100 points for each State worked.

Contacts on 5 MX.—500 points for each State worked.

The sum of bonuses plus those points scored as in Rule 8 will constitute the grand total score.

10.—The cypher to be exchanged consists of 10 letters. The first five are to be chosen by the entrant, and to be used as his identifying letters throughout the contest. The remaining five letters are to be the first five letters of the last station contacted. The initial cypher should consist of the five letters of the originating station, plus five A's, e.g., XYZABAAAAA.

11.—All logs must reach the Federal Executive, Box 2127L, G.P.O., Sydney, by 31st January,

1939. The logs must contain:—

- (a) Time, date, band and call sign of station worked.
- (b) Cypher sent and received at each contact.
- (c) Points claimed, contact points and bonus points.

12.—The scores of the three leading competitors in each State will be totalled, and the State having the highest aggregate will be awarded the Trophy. Certificates will be awarded to the leading two stations in each State.

13.—The decision of the Federal Headquarters Executive of the W.I.A. will be final and binding in all matters.

**C**ASSIS COVERS in sprayed steel or aluminium, also Relay Racks built to specifications. Transmitter Name Plates in Ivorine, Brass or Chromium Plated. Phone B5056. Write or call to CHAS. HANDFORD, 13-15 Mary st., BRISBANE.

## HYTRON TUBES.

Attention is directed to the notification in this issue from P. and L. Wireless Supplies Pty. Ltd. It features the dependable Hytron Transmitting Tubes, 25 and 40, obtainable only from this firm.

(Continued from Page 9.)  
ordinary use as it is essential for adequate low frequency response.

No difficulty should be experienced in building this job and the results will, I feel sure, be very satisfactory. The whole unit was finished one week-end and the first call brought in a W2, the second a W8, which was very pleasing after calling them for days with grid modulation and getting nothing but back fence contacts.

## Hytron Transmitting Tubes



H.Y. 25 Triode having 25 watts plate dissipation . . . . .	22/6 net
H.Y. 40 Triode having 40 watts plate dissipation . . . . .	38/6 net

Obtainable only from

**P. & L. WIRELESS SUPPLIES**

PTY. LTD. TELEPHONE: F4328.

213 ELIZABETH STREET, MELBOURNE.

## Appearance!

Nowadays many a job is sold on appearance, and this angle has an important bearing—more or less—in the minds of all of us when we get going on the design and lay-out of the new rig.

We are frequently asked whether it is possible to have audio transformers, power transformers, and chokes, similar externally. The answer is that it all depends on ratings, and in an effort to clarify the position, here goes:—

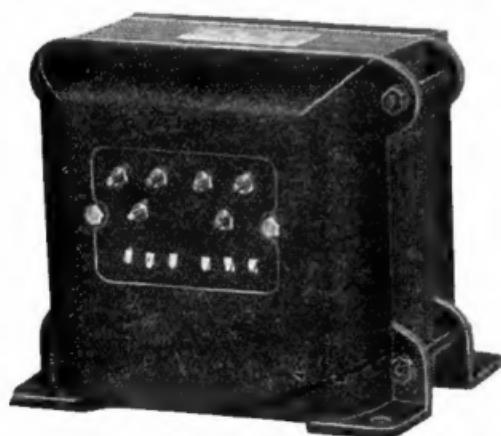


No. 1. We have a range of standard driver transformers, output transformers to handle up to 20 watts of audio, 30 henry chokes at 100 m.a., and power transformers with a capacity of up to 60 volt-amperes all similar in external appearance to illustration No. 1.

No. 2 covers output transformers to handle around 30 watts, 30 henry 150 m.a. and 15 henry 250 m.a. chokes, 30 watt universal modulation transformers, and power transformers up to 250 V.A.



No. 2.



THE MODERN  
MODULATOR.

An illustrated and descriptive folder and price list covering rack, chassis, transformers and chokes used in the unit described in this issue is available free for the asking.

May we send you one?

HARRY CLIFF,  
VK3HC.

No. 3.

MANUFACTURED BY

**TRIMAX TRANSFORMERS**  
(A DIVISION OF CLIFF & BUNTING PTY. LTD.)

29-35 FLEMINGTON ROAD, NORTH MELBOURNE.  
PHONES—F1346, F2550.

# TE ARO BOOK DEPOT LTD.

64 Courtenay Place, Wellington, N.Z.

(N.Z.'s Leading Radio Bookshop)

Sole N.Z. distributors of "Radio" Monthly (a popular "Ham" magazine, 2/2 per copy, or 19/6 annual sub. posted).

Other "Radio" publications stocked are:—

Frank Jones' "Radio Handbook," 1938 8/-, 1937 6/-.

Frank Jones' "Antenna Handbook," 1938 3/6, 1937 2/6.

Frank Jones' "Amateur Radio Telephony," 5/6.

Frank Jones' "Radio Digest" (bi-monthly), 2/- per copy.

Frank Jones' "Radio Amateur Newcomer," 2/-.

Frank Jones' "Radio Noise Reduction," 2/6.

Send for our list of other "Ham" publications and compare our prices with Australian charges. You will save money. New stocks by every overseas mail.

We can start your "Radio" annual sub. with November, 1937, issue if desired.

The reason for our increasing Australian business is obvious.

## Hamads

ATTENTION, PLEASE! HAM GEAR BARGAINS. Don't Miss These. GAMMATRON HK-54's (50 watt Plate Dissipation), Special Price, 60/- each; TAYLOR T-40's, Special at 30/- each; R.C.A. 866's a gift at 15/- ea. ONLY FEW of each to be cleared at these prices. WE PAY POSTAGE, CASH WITH ORDER. Obtainable VK3FA, B. Falckenberg, BYADUK, Vic.

BRIGHT STAR RADIO, VK3UH, 517 Lower Malvern Rd., Glen Iris, S.E.6.

Crystals ground from best Brazilian quartz and tested to 50 watts input to pentode oscillator, as used by leading experimenters and DX stations throughout Australia; accuracy plus or minus 3 KC's.

160 Metre	..	..	..	15/-
30 Metre	..	..	..	10/-
40 Metre	..	..	..	£1 5/-
465 KC Xtal Gates	..	..	..	22

Crystal Blanks, prices on application.

Receivers and Transmitters constructed.

Taylor first quality 866 mercury vapour Rectifiers, 7,500 volts peak, 17/6; National type N Dials, £2 each; Taylor T20 Triode transmitting tubes, 20 watts plate dissipation, 42 watts RF output, price 25/-

Taylor T55 Triode Transmitting Tubes, £3 10/- each.

Call or write above address.

Phone U1218.

Satisfaction guaranteed.

FOR SALE.—Amplion Genemotor, 32 volts input, 500 volts 150 m/a. output (almost new), 2 stage 6L6G transmitter, complete with xtal, 7 and 14 mc. coils, and 2 milliammeters, 4 tube D.C. Receiver, £17 10/- the lot. Apply VK3JA, Nullawarre, Vic.

XITALS by W9ADN, AT cuts, 3.5 mc., 20/-; 7 mc., 22/6; 14 mc., and filters, prices on application; MOUNTS, American, 8/6; R.F. CHOKES, 10/200 mx., 200 ma, 2/6; 10/200 mx. 500 ma, 5/-, 5 mx, 1/9; BUGS, 50 in use in Telegraph Branch, Melbourne, 35/-, plus postage; KEYS, P.O. Pattern, 14/6, plus postage. VK3RJ, 23 Landale street, Box Hill, Vic.

(See Page 27 for Additional Hamads.)

# *Radiotron 902*

2-inch Cathode Tube

This new release provides at a reasonable price the ideal means for checking modulation and waveform. The 902 requires only 400-600 volts supply and the deflection sensitivity is high.

#### Special Features

Octal base (same connections as 913).

Medium Persistence Screen.

Electrostatic deflection

Maximum diameter  $2\frac{1}{8}$ ".

Maximum overall length  $7\frac{5}{8}$ ".

Price £2/15/- nett



# RADIOTRONS

*The World's Standard Valves*